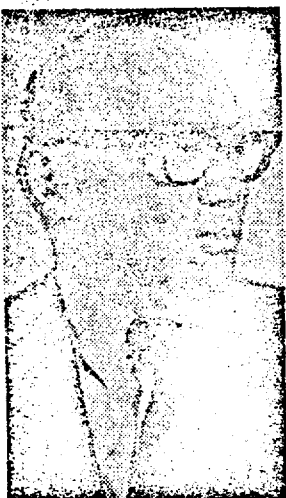


Science And Man

The Risky Pregnancy

By Joshua Lederberg

FOR SEVERAL YEARS, medical geneticists have anticipated the theoretical possibility of diagnosing serious disease of the fetus during early pregnancy. By a procedure called amniocentesis, fluid samples can be withdrawn from the sac that bathes the fetus and analyzed by cell culture and microscopic examination. This is at present the only method by which the sex of the child-to-be can be ascertained before its birth.



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The chromosome anomaly "Downs Syndrome" has been one of the most obvious and urgent candidates for the exploration of prenatal diagnosis. The disease occurs in two forms. One is virtually unpredictable except that it occurs more frequently in births to mothers over 40. The

second form is inherited from "translocation-carriers" who have no disease themselves but have the terrifying 50-50 risk that any pregnancy will engender a grossly defective child suffering from severe mental retardation and prone to heart abnormalities and leukemia.

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THE TWO FORMS can be distinguished by chromosome analysis, which is then particularly useful in counseling a younger woman who has already had a Downs-type child about her risk of repeating the catastrophe in future pregnancies. The prospect of prenatal diagnosis would now help a high-risk mother to foresee the consequences of another pregnancy, be it planned or not.

Dr. Cecil B. Jacobson of George Washington Medical School has been one of the strongest advocates of these techniques. In a report last November in the American Journal of Obstetrics and Gyn-

risk mothers whom he was able to reassure that their pregnancies would have a lucky outcome.

Still more recently, in the July 27 issue of the Lancet, Dr. Carlo Valenti of Downstate Medical Center of Brooklyn reported what is probably the first case of prenatal diagnosis of Downs Syndrome. The mother was a high-risk carrier who first presented at the 16th week of pregnancy. The patient, who may also have been supported by other justifications, was allowed a therapeutic abortion, which verified the diagnosis of severe malformation. According to Dr. Valenti, "the patient greatly wants to have children provided that the same diagnostic technique is applied to her future unborn babies."

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THE MOTHER HAD better be cautioned that in many jurisdictions she might face a barbarous law that would deny her the right to an abortion on that simple fact — the awful knowledge of an inevitable monstrosity. Happily, we can now be sure that these laws will not long stand in the face of popular demands for their reform.

Besides giving this kind of backstop that encourages pregnancy when it might otherwise be too risky, more permissive abortion may also help to eliminate the need to apply it. One serious limitation to research on distortion of fetal development has been the difficulty of collecting material for close observation of its early stages. It is not hopeless to believe that we may sometime learn how to counteract the chromosome anomaly by very early treatment of the fetus.

This report is another milestone in the human mastery of nature. Dr. Valenti's patient need no longer feel herself a slave to a gamble that might otherwise deal her and her children an intolerable fate.

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AMNIOCENTESIS STILL has uncertain risks and cell culture is expensive, but this step is bound to be followed by other advances that may make prenatal diagnosis much more routine. Two dangers can be foreseen.

The first is that parents may adopt faddish and socially disturbing criteria for the quality of the fetuses they wish to rear as children. However, we cherish a very wide range of eccentricities in the equally important styles of child-rearing from birth to kindergarten.

The second prospect is much more alarming — that the Government may become too deeply involved in such decisions. The archaic laws on abortion made a good start in creating a system that bootlegged illegal abortions on a large scale — for the privileged class. The preservation of individual rights of private decision in reproductive policy is a major challenge to democratic society.